

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006693**Date Inspected:** 11-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Steve Barnett**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Hinge-K Components**Summary of Items Observed:**

Summary of Items Observed: On this date, Caltrans Quality Assurance Inspector (QA) Clete Henke was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR for observation of fabrication of the Hinge K Pipe Beams and related activities including in process welding and OIW Quality Control (QC) visual and nondestructive testing. The following observations were recorded:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-5:

a125 stiffener ring to a124-14 Fuse

The QA Inspector intermittently monitored OIW welder Yuriy Bannikov (WID B61) during in progress Submerged Arc Welding (SAW) at weld joint WM3-16 joining a125 stiffener ring to a124-14 Fuse Section. The QA Inspector observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of completed root passes at weld WM3-16. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector subsequently performed 100% VT at the location noted above finding the root pass to be in general compliance with contract documents. The QA Inspector intermittently observed as welder B61 continued to deposit SAW fill and cover passes in the flat (1G) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing two torches. An OIW helper was observed assisting welder B61 during SAW process. The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass temperature of 350deg F appeared to be in general compliance with the contract requirements -- (33 volts, 600 amperes, 457 mm/min travel speed).

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Hinge-K Pipe Beam Base Assembly 102A-1:

a111-1 forging to a110-4 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-2:

a111-2 forging to a110-2 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-3:

a111-3 forging to a110-3 base plate

The QA Inspector was informed by QA Lead Inspector Joe Adame that Base assembly 102A-3 had undergone QC NDT and was available for final QA NDT verification. The QA Inspector performed visual testing (VT) of 100% of the complete joint penetration (CJP) weld joining a111-3 tubular forging with a110-3 base plate identified as W2-12 & W2-13 prior to performing UT verification. The QA Inspector noted that the above identified weld joint appeared to be in general compliance with the contract requirements. The QA Inspector performed UT of approximately 10% of the above identified CJP weld joint, locating three rejectable indications per AWS D1.5 2002, Table 6.3 -Tensile Stress. Please reference TL-6027 for 5/11/09 for additional information. The QA Inspector marked the adjacent areas accordingly.

Hinge-K Pipe Beam Base Assembly 102A-4:

a111-4 forging to a110-1 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift. OIW QC Inspector Steve Barnett contacted the QA Inspector and stated that he was preparing to initiate 100% Ultrasonic Testing (UT) of complete joint penetration (CJP) weld joining a111-4 tubular forging with a110-1 base plate identified as W2-12 & W2-13. Mr. Barnett was observed performing the testing described above intermittently for the remainder of the shift, completing approximately 60%.

Hinge-K Pipe Beam Fuse Assembly 120A-1:

a124-6 to a124-7

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-2:

a124-3 to a124-11

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-4:

a124-13 to a124-4

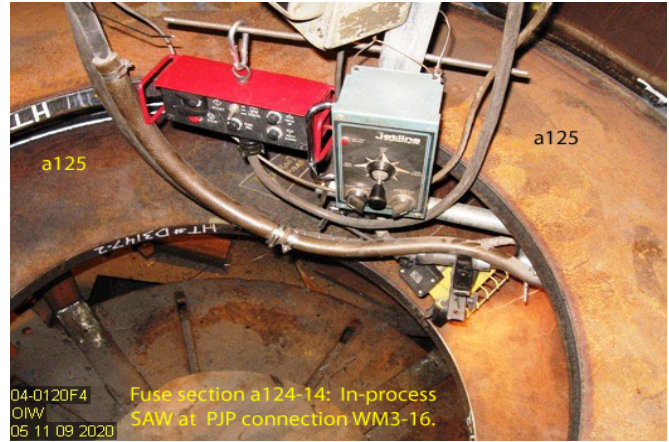
The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Material, Equipment, and Labor Tracking:

The QA Inspector performed verification of personnel involved with this project and equipment in use. The QA Inspector accounted for 2 OIW production personnel and 1 Quality Control Inspector present on this date.

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Summary of Conversations:

As noted in the body of the report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677 , who represents the Office of Structural Materials for your project.

Inspected By: Henke,Clete

Quality Assurance Inspector

Reviewed By: Adame,Joe

QA Reviewer